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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,139

07/17/2006

Dan Kuylenstierna

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EXAMINER

LEE, BENNY T

ART UNIT

PAPER NUMBER

2817

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/586,139	<b>Applicant(s)</b> KUYLENSTIERNA ET AL.	
	<b>Examiner</b> Benny Lee	<b>Art Unit</b> 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 4-6 is/are allowed.
- 6) ☒ Claim(s) 1; 7 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

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The substitute specification foiled 30 July 2008 has been found acceptable and has replaced the original specification.

The disclosure is objected to because of the following informalities in the substitute specification filed 30 July 2008: Page 1, in the heading, note that “SUMMARY” should be rewritten as --SUMMARY OF THE INVENTION-- for consistency with PTO guidelines. Page 3, in the brief description of “Fig. 4”, note that the reference to “line III-III” does not appear consistent with any labeling in Fig. 3 and needs clarification; in the brief description of “Figs. 5a, 5b, and 5c”, note that “shows” should be rewritten as --show-- for grammatical clarity; in the brief description of “Figs. 7-12”, note that such collective description should be rewritten to provide brief descriptions of the individual drawing figures in this sequence; in the heading, note that “DETAIL DESCRIPTION” should be rephrased as --DETAIL DESCRIPTION OF THE INVENTION-- for consistency with PTO guidelines and this heading should be placed as a separate paragraph. Page 7, line 10, note that “imagined” should be rewritten as --imaginary-- for an appropriate characterization; line 23, note that “joining conductor 533” should reference --Fig. 5c-- in which it appears for an appropriate characterization. Page 8, line 23 through page 10, line 11, in the detail description of “Fig. 7”, note that the following recitations are not consistent and need clarification: “second direction of extension 712” & “first section 712”; “third direction of extension 713” & “fourth direction of extension 713”, respectively and “third direction of extension 711” as well as “first section 711”; “first conductor 710” & “second conductor 720”, respectively and “first conducting pattern 710” & “second conducting pattern 720”; “first conductor’s sections 712” & “second conductor’s sections 713”, respectively and “second direction of extension 712” & “third direction of extension 713”. Applicants’ should review the

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labeling in Fig. 7 for consistency in terminology and reference numbering. Note that the following reference labels appearing in the noted drawing figures needs a corresponding description in the specification description of that drawing figure: Fig. 1 “130”; Figs. 2, 4 (+, -); Fig.3, “C”. Appropriate correction is required.

The drawings are objected to because of the following: In Fig. 3, note that lines --III-III-- need to be provided such as to be consistent with the brief description of Fig. 3.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 7, note that the recitation “so that points where sections of the first conductor... meet overlap portion in the second conductor” is not definite since such features have not been positively defined as having “overlap points” in either the present claim or any prior claim from which this claim depends. Appropriate clarification is needed.

The following claims have been found to be objectionable for reasons set forth below:

In claims 1, 4, line 9 of each claim, note that “each other’s mirror image” should be rephrased as --mirror images-- for an appropriate characterization at each occurrence.

In claim 3, line 3, note that “it” should be rephrased as --said third conductor-- for clarity of description.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Das ('001), of record.

Note that Das (Fig. 15) discloses a meander line variable delay line configuration comprising: a first meander line conductor (e.g. 5) and a second meander line conductor (e.g. 43) being arranged on top of a substrate (e.g. 15 in related Fig. 2 of Das); a ferroelectric layer (e.g. 14) is configured to be interposed between the substrate and the first and second conductors. Note that the first and second conductors are each aligned to be parallel to each other along a “first direction of extension” (i.e. in a direction aligned between input 10 & output 11). Also, note that by virtue of the parallel alignment of the conductors along with meander line shape of

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the first and second conductors, such an alignment results in the conductors being “mirror image” along a centrally located line of symmetry. Moreover, note that the “mirror image configuration include for the first conductor (5), a “second direction of extension”, which is orthogonal to the first direction of extension and a “third direction of extension”, which is parallel to, but laterally offset, from the first direction of extension. Similarly, for the second conductor (43), a “fourth direction of extension” is oriented orthogonal to the first direction of extension and a “fifth direction of extension” is aligned parallel to, but laterally offset, from the first direction of extension. Furthermore, note that the first, second and third directions of extension for the first conductor (5) are configured along with the first, fourth and fifth directions of extension for the second conductor (43), such that the conductors (5, 43) result in mirror images of each other. Finally, note that in operation, bias voltages must necessarily be applied relative to the first and second conductors to thereby bias the ferroelectric layer and thus resulting in a tunable delay line configuration.

Applicant’s arguments with respect to claim 1 have been considered but are moot in view of the new grounds of rejection.

Claim 7 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112 set forth in this Office action.

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

Claims 4-6 are allowable over the prior art of record.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ozawa pertains to a meander delay line having sections, which are mirror images of each other.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

**/BENNY LEE/  
PRIMARY EXAMINER  
ART UNIT 2817**

B. Lee